



CRATE

B-150 AMPLIFIER

CRATE**B-150 AMPLIFIER**

We would like to take this opportunity to thank you for selecting a Crate product, and to tell you of our commitment to the design and manufacture of only the finest musical instrument amplification equipment; built for you, the musician.

You have purchased one of the most innovative sound amplification devices available today. Your Crate amplifier gives you more performance features than ever before; features that you, the musician, have asked for.

Your Crate amplifier is an American product, manufactured at our factory in St. Louis, Missouri. Only the finest available components and materials are used in the manufacture of each amplifier.

All Crate amplifiers are subject to seven or more inspection and testing stops to assure you of a high quality product. The final test for each amp is conducted by a trained musician with the instrument the amp was designed for. Any unit that does not meet the standards of his discriminating ear will not be passed.

Since all Crate products are designed, developed, and manufactured through the cooperative efforts of engineers and professional musicians, the end result is a product that responds to the musician's audio requirements, and a product that will serve your needs for years to come.

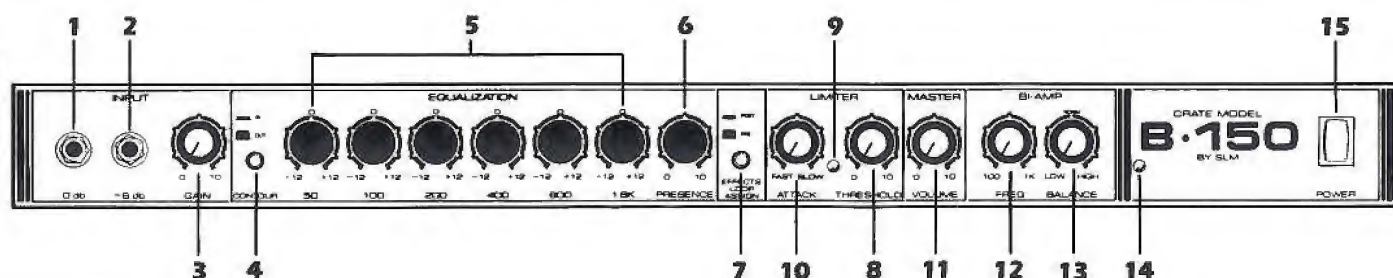
B-150 TECHNICAL SPECIFICATIONS

Output Power Rating	150 watts RMS @ 5% THD 4 ohm load — 120 VAC line
Speaker Size and Rating	B-150C: 15" with 2-1/2" voice coil and 56 oz. magnet Power Handling 150 watts B-150CS: 15" Electro-Voice Force B-150H: No speaker, head only
Equalization	±12 dB @ 50, 100, 200, 400, 800, and 1600 Hz
Presence Control	12 dB boost @ 3KHz
Contour Switch	Special frequency tailoring
Input Impedance	220 K ohms/"0 dB" input 56 K ohms/"-15 dB" input
Maximum Input Signal Level Accepted	15 volts, peak to peak
Gain @ 1 KHz	57 dB with tones flat, Presence and Contour off
Outputs @ Full Power	
Unbalanced Line Out (rear panel)	.85 volts RMS
Balanced Line Out (600 ohm load)	.95 volts RMS
Effects Send ("Pre")	.52 volts RMS
BI-amp Outputs	.65 volts RMS
Line Out (bottom panel)	.65 volts RMS
Signal to Noise Ratio	65 dB
Input Power Requirements	120 VAC, 60 Hz 500 watts max
Cabinet Size and Weight	27" H x 24" W x 16" D 70 lbs.

CAUTION: To reduce the risk of electric shock, do not remove chassis. No user serviceable parts inside. Refer servicing to qualified service personnel. To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

Specifications subject to change without notice.

FEATURES AND FUNCTIONS



Front Panel

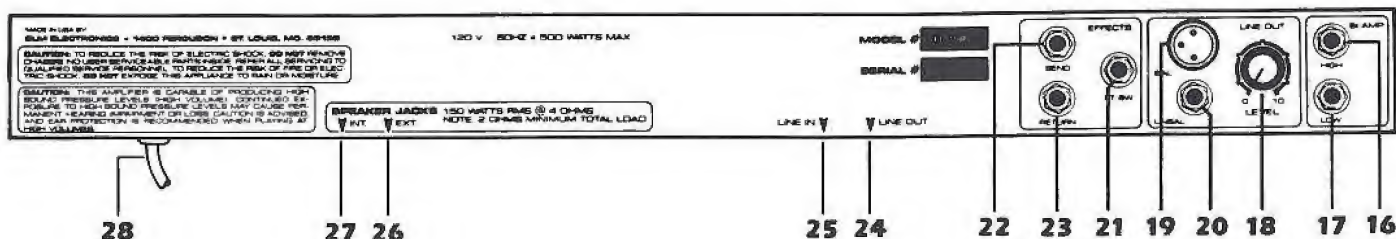
1. **0 dB Input Jack:** This input accepts a standard 1/4" phone plug and is suitable for any low to line level signal source such as an electric bass.
2. **-15 dB Input Jack:** This input also accepts a standard 1/4" jack but is padded 15 dB for hotter inputs such as tape decks or basses with hot pickups. If both jacks are used, this input is not padded and will be equal to the 0 dB input jack.
3. **Gain Control:** This control sets the amount of gain for the pre-amp. A low output instrument or soft playing style requires high gain (5-10 setting) while a high output instrument or hard playing style requires less gain (1-4 setting). Too high a setting along with boosted equalization may cause distortion or a harshness of sound. If this is not desired simply reduce the gain with this control.
4. **Contour Switch:** When selected this control cuts the midrange and boosts the high frequencies similar to traditional passive tone controls.
5. **Six Band Active Equalization:** This is the main tone control section. 12 dB boost or cut is available at each of six frequencies to tailor the sound to the player's needs. The lower frequencies affect the "bottom" and "warmth." The middle frequencies control the definition and "edge" and the high frequencies determine the "bite" and "sizzle." The middle and high frequency controls are also useful in controlling fret buzzes and other noises from the instrument.
6. **Presence Control:** This control adds additional high frequency

boost such as desired for a "popping" or "slapping" playing style.

7. **Effects Loop Assign:** This switch determines the placement of the effects loop (22,23). In the "Pre" position the effects loop is placed before the equalization section. In the "Post" position it is after the equalization section. The player must decide on correct placement for the particular device used. Noisy devices should be placed "Post" and devices more sensitive to signal overload should be placed "Pre."
8. **Limiter Threshold Control:** The limiter keeps the signal from going above a given threshold (volume) as selected by this control. Turning this control clockwise lowers the threshold level decreasing the level of sound (more limiting). At "0" the limiter is off. Limiting allows the player to obtain a smooth, even sound level with more sustain. The limiter may also be used to protect the power amp from distorting by setting this control and the Master Volume control (11) at "10." This allows the power amp to develop full power without clipping.
9. **Limiter LED Indicator:** This LED is lit when the signal level is above the threshold selected by the Limiter Threshold Control (8).
10. **Limiter Attack Control:** The attack time is the time needed by the limiter to reduce a large signal to the threshold level. Turning this control toward the "Fast" position (counterclockwise) lets very little of the instrument's initial attack through giving a smooth, organ-like sound. Turning this control toward the "slow" position (clockwise) lets more attack

through. This results in a "punchy" bass sound while keeping the overall sound level constant.

11. **Master Volume Control:** This control sets the overall listening level of the B-150. With the limiter in use this control allows the player to limit the output at any desired level. Gain, Limiter Threshold, and Master Volume are all interactive, so the player must experiment to obtain the exact effect and volume desired.
12. **Bi-Amp Frequency Control:** The Bi-Amp outputs (16,17) split the signal into high and low frequency outputs. The crossover frequency (splitting point) is selected by this control.
13. **Bi-Amp Balance Control:** This control varies the relative levels of the Bi-Amp outputs. This allows matching the outputs to power amplifiers with different sensitivities or for adjusting the overall tonal balance. The detented center position ("Norm") provides equal gain to the high and low frequency outputs. Turning this control clockwise increases the high frequency output and decreases the low frequency output. Turning it counterclockwise has the opposite effect. The level of the Bi-Amp outputs is adjusted by the Master Volume Control (11) in conjunction with the Bi-Amp Balance Control.
14. **On/Off LED Indicator:** When this LED is lit the unit is on.
15. **On/Off Switch (Power):** The down position of this two position switch turns the unit on and the up position off.



Rear Panel

- 16. Bi-Amp High Output Jack:** This jack is the Bi-Amp high frequency output.
- 17. Bi-Amp Low Output Jack:** This is the Bi-Amp low frequency output. The Bi-Amp outputs can be connected to two separate power amplifiers or the B-150 can be expanded by plugging one output into a separate power amplifier and the other output into the Line In Jack (25).
- 18. Line Out Level Control:** This control adjusts the level of the two Line Out jacks (19,20) next to it.
- 19. Balanced Line Out Jack:** This jack provides a low impedance balanced output for connecting the B-150 to an external power amplifier or mixer with balanced inputs.
- 20. Unbalanced Line Out Jack:** This jack provides a high impedance unbalanced output for connecting the B-150 to another amplifier, tape recorder, etc. This jack and the Balanced Line Out Jack (19)

are independent of the Master Volume control (11).

- 21. Effects Footswitch Jack:** A standard footswitch pedal can be plugged in here to engage or defeat the effects in the effects loop (22,23).
- 22. Effects Loop Send Jack:** This jack can be connected to the line level input for an external effects device.
- 23. Effects Loop Return Jack:** This jack can be connected to the line level output of an external effects device.
- 24. Line Out Jack:** This jack can be used as an output to another power amplifier or with the Line In jack (25) as another effects loop. Its level is determined by the Master Volume control (11) but is not affected by any other effects loop controls (7,21).
- 25. Line In Jack:** This jack is used as a direct input to the power amp. Plugging into this jack disconnects the direct (normal) connection be-

tween the preamp and power amp. The Line Out Jack (24) can be used with this Jack as an additional effects loop.

- 26. External Speaker Jack:** This jack is used for additional speaker hookup. The B-150 External Speaker jack is hooked up in parallel with the Internal Speaker jack so adding additional speakers will lower the total load impedance connected to the power amp. Do not go below 2 ohms total load impedance.
- 27. Internal Speaker Jack:** The internal Custom Design speaker (4 ohms) is plugged into this jack (not applicable on B-150H). To disconnect the internal speaker simply unplug the cable from this jack. Another external speaker can be plugged in if the total load is still at least 2 ohms. Total load should not be less than 2 ohms.
- 28. Power Cord:** Be sure the amplifier is properly plugged into a safely wired AC outlet before use.

WARNING: NEVER PLUG HEADPHONES INTO EITHER SPEAKER JACK — YOU COULD SUFFER PERMANENT LOSS OF HEARING OR DAMAGE YOUR HEADPHONES.

LIMITED WARRANTY

SLM Electronics, a division of St. Louis Music Supply Company, warrants this electronic equipment for one (1) year from date of purchase to the original purchaser and is not transferable. This warranty includes defects in workmanship and materials within this one (1) year period except for tubes, meters and speakers covered separately. Tubes and meters will carry a 90 day warranty.

Excluded from this warranty are defects caused by wear and tear, misuse, neglect, alterations or modifications, or any act of nature. Such determinations will be made by SLM Electronics.

All parts costs will be borne by SLM Electronics within the warranty period. Labor costs will be covered within this warranty period according to rate schedules established by SLM Electronics. Warranty service will be done either at SLM Electronics or an authorized field service center. Transportation charges involved in warranty service are the sole responsibility of the purchaser.

Speakers are guaranteed for ninety (90) days against manufacturing defects. Realizing that any speaker can be overloaded or misused causing failure, SLM will replace it with a speaker of the same type at a price equal to one-half of the then current suggested list price of the new speaker for life from date of registration, regardless of reason.

This warranty only applies if this piece of equipment was purchased from an authorized dealer. If this piece of equipment is to be returned to SLM Electronics, it must be accompanied with an authorized dealer's instructions as to needed repairs and a SLM Electronics return authorization.

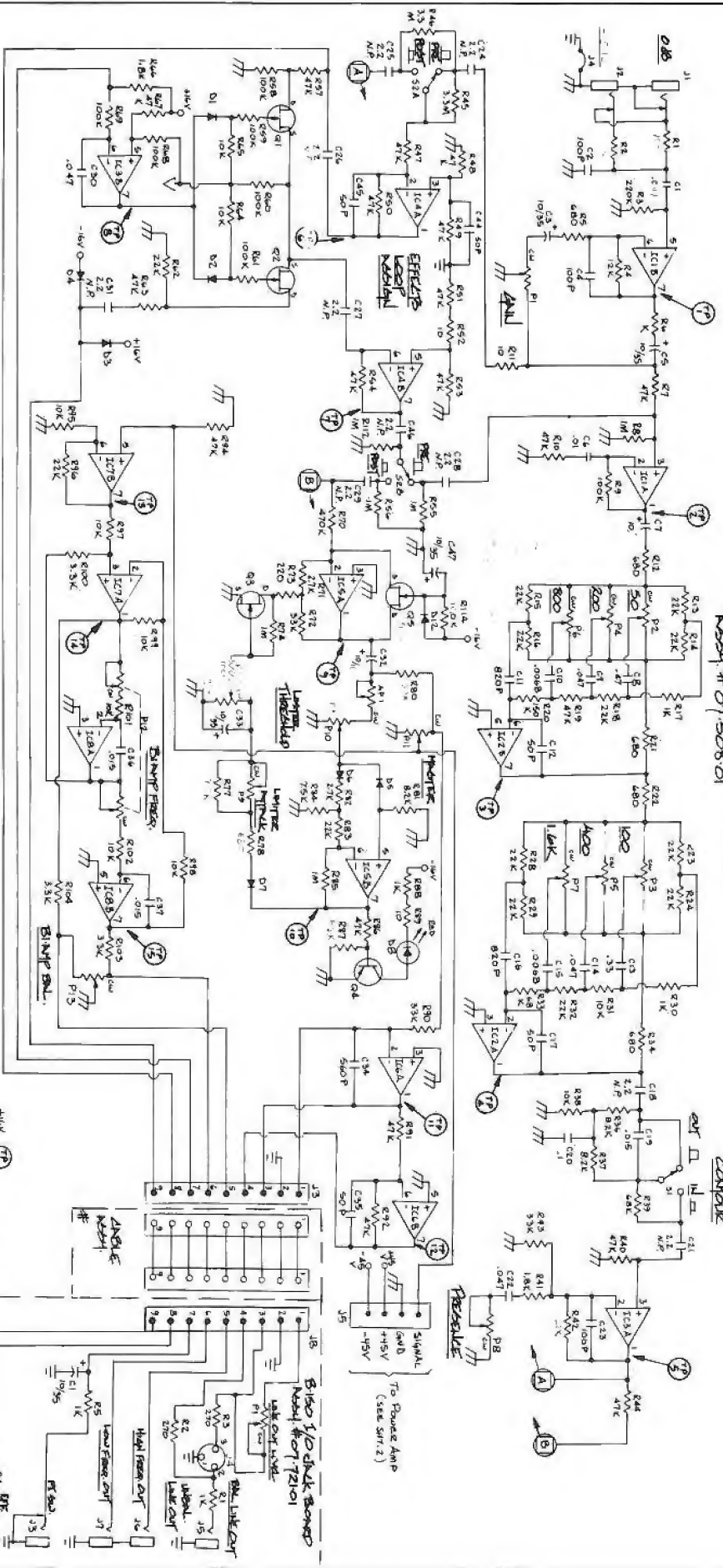
There are no other warranties expressed or implied other than those stated in this warranty. This warranty registration card must be filled out and returned to us within ten (10) days after purchase. We reserve the right to repair or replace this piece of equipment at our option.

SLM ELECTRONICS division of **ST. LOUIS MUSIC**
1400 Ferguson Ave. • St. Louis, MO 63133

B.150 PREAMPLIFIER P.C. BOARD

Model # 0750801

CONTINUE



Notes:

- 1) Unless otherwise specified, all components are to be used as shown in the schematic.
- 2) Typical IC's are 741, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Top View

TEST POINT	100mV/P-P	1KHz INPUT	0.1V/P-P	1KHz IN	4
1	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
2	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
3	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
4	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
5	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
6	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
7	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
8	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
9	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
10	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
11	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
12	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
13	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
14	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
15	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
16	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
17	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4

Bottom View

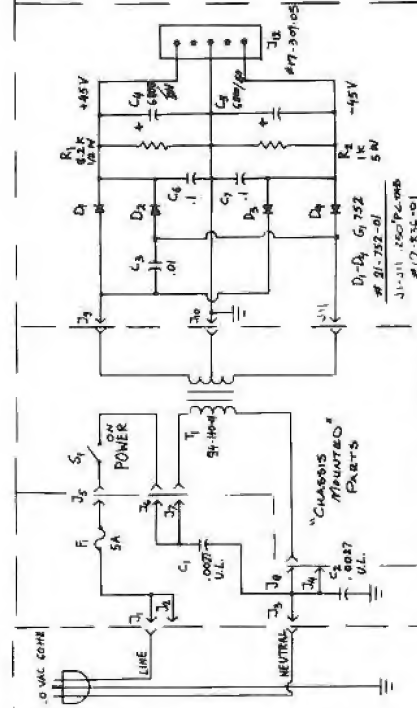
TEST POINT	100mV/P-P	1KHz INPUT	0.1V/P-P	1KHz IN	4
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3	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
4	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
5	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
6	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
7	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
8	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
9	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
10	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
11	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
12	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
13	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
14	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
15	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
16	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4
17	1.7 V-P-P	0 V-P-P	0.5 V-P-P	0 V-P-P	2.4

CAUTION: These servicing instructions are for use by qualified personnel only. To avoid electric shock, do not perform any servicing other than that contained in the operating instructions. Refer all servicing to qualified service personnel.

(P.C. BOARD # 06A402-04)



Low Corp.
97-079-01



POWER SUPPLY P.C. BOARD
Assy # 07-312-01

Page	Classification	File Number	File	Registration	File Number
Q1	280387	96-587-01	01	18456	21454-01
Q2	280387	96-587-01	02	18456	21454-01
Q3	280435	96-587-01	03	18675A	21454-01
Q4	280435	96-587-01	04	18675	21454-01
Q5	280387	96-587-01	05	18675	21454-01
Q6	280387	96-587-01	06	18675A	21454-01
Q7	280387	96-587-01	07	18675	21454-01
Q8	280387	96-587-01	08	18675	*214931-01
Q9	117326	96-102-01	09	186002	214607-01
Q10	117326	96-102-01	10	186007	214607-01
Q11	117326	96-102-01	11	47318	17-311-04
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Q54	117326	96-102-01	54	11240C	39-012-01
Q55	117326	96-102-01	55	11240C	39-012-01
Q56	117326	96-102-01	56	11240C	39-012-01
Q57	117326	96-102-01	57	11240C	39-012-01
Q58	117326	96-102-01	58	11240C	39-012-01
Q59	117326	96-102-01	59	11240C	39-012-01
Q60	117326	96-102-01	60	11240C	39-012-01
Q61	117326	96-102-01	61	11240C	39-012-01
Q62	117326	96-102-01	62	11240C	39-012-01
Q63	117326	96-102-01	63	11240C	39-012-01
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Q72	117326	96-102-01	72	11240C	39-012-01
Q73	117326	96-102-01	73	11240C	39-012-01
Q74	117326	96-102-01	74	11240C	39-012-01
Q75	117326	96-102-01	75	11240C	39-012-01
Q76	117326	96-102-01	76	11240C	39-012-01
Q77	117326	96-102-01	77	11240C	39-012-01
Q78	117326	96-102-01	78	11240C	39-012-01
Q79	117326	96-102-01	79	11240C	39-012-01
Q80	117326	96-102-01	80	11240C	39-012-01
Q81	117326	96-102-01	81	11240C	39-012-01
Q82	117326	96-102-01	82	11240C	39-012-01
Q83	117326	96-102-01	83	11240C	39-012-01
Q84	117326	96-102-01	84	11240C	39-012-01
Q85	117326	96-102-01	85	11240C	39-012-01
Q86	117326	96-102-01	86	11240C	39-012-01
Q87	117326	96-102-01	87	11240C	39-012-01
Q88	117326	96-102-01	88	11240C	39-012-01
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Q98	117326	96-102-01	98	11240C	39-012-01
Q99	117326	96-102-01	99	11240C	39-012-01
Q100	117326	96-102-01	100	11240C	39-012-01

PARTS LIST (POWER AMP)

Norad:

1) Except as indicated, all resistors in MPO-25 have $\pm 5\%$ tolerance.
 all resistors in Omega $\pm 1\%$ tolerance.

2) Voltages measured with: 1 Megohm input oscilloscope
 (AC) 10 Megohm input D.V.M. (DC). Take loading into
 account if using other equipment.

AC signal voltage: 1582 mV rms (input, 4 ohm load)
 DC voltage: 20 signal input
 3) Rise voltage: 80 signal, no load, @ 120V rms
 at Turn-on: 3.5ms across 89C
 After 30s: 6ms across 89C

A-I-GUITAR AND VERSION

B•150 POWERAMP

REVISIONS: ① 12-19-87 TJS 27-7-87	GUM ELECTRONICS 1400 Ferguson Ave. ST. LOUIS, MO. 63105 Sr. Sales Rep 2002 DEWENTS, No: 18-4010
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CAUTION: These servicing instructions are for use by qualified personnel only. To avoid electric shock, do not perform any servicing other than that contained in the operating instructions. Refer all servicing to qualified service personnel.